

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

Claims 1-32 (canceled)

33. (currently amended) An ink consumption condition detection method according to claim 1, An ink consumption condition detection method for detecting an ink consumption condition in an ink container loaded in an ink jet recording apparatus having a recording head for jetting ink drops, wherein said ink consumption condition in said ink container is detected using a piezo-electric device having a piezo-electric element during a non-recording state of said recording head,

wherein said piezo-electric device further has a vibrating plate on one side of which said piezoelectric element is arranged, and a cavity forming member having a cavity which is arranged on the other side of said vibrating plate,

wherein said piezo-electric element of said piezo-electric device has a vibration part, and said piezo-electric device outputs a signal indicating a residual vibration state of said vibration part under free vibration,

wherein said vibration part of said piezo-electric element contacts with an ink in said ink container via said cavity, said cavity defining an area of said vibration part,

wherein said ink consumption condition is detected based on a change of said residual vibrating state of said vibration part under free vibration corresponding to ink being consumed,  
and

~~wherein said piezo-electric device has a vibration part including said piezo-electric element, and~~

wherein said piezo-electric device measures a periodic peak value of a waveform of counter electromotive force generated by residual vibration remaining in said vibration part by a predetermined number of said periodic peak values from a predetermined point of time, and said piezo-electric device measures more number of said periodic peak values than said predetermined number of said periodic peak values in subsequent detection of said ink consumption condition, and thereby detects said ink consumption condition.

34. (Original) An ink consumption condition detection method according to claim 33, wherein said periodic peak value of said waveform of counter electromotive force is measured by increasing said predetermined number of values from said predetermined point of time in accordance with increasing of a detection count of said ink consumption condition in the ink container, and thereby said ink consumption condition is detected.

35. (Original) An ink consumption condition detection method according to claim 33, wherein said ink jet recording apparatus or said ink container has a storage memory, and said

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U.S. Application No. 10/031,408

storage memory stores a measurement history of said ink consumption condition of said piezo-electric device.

Claims 36-71 (canceled)